WISCONSIN

JOURNAL OF EDUCATION.

Vol. II. April, 1872. No. 4.

METHODS OF TEACHING GEOGRAPHY IN SWITZERLAND.

BY JACOB WERNLI, PRINCIPAL NORMAL SCHOOL, GALENA, ILL.

If the excellent text books of Professor Guyot, and others, who followed him in the right direction; if the hundreds of thousands of those books in the hands of the students, and the large sums spent for them every year, by the citizens of the United States, are a true index of the excellence of the method which is applied in teaching geography in the schools of America, then again, Switzerland and all Germany, even Prussia not excepted, stand far, very far below the Queen of the West.

But the text book is not the teacher, or at least, it should not be the teacher. The very best text book, in the hands of a poor, ignorant teacher, might prove a failure. This also is true in regard to outline maps, and the exercises in map-drawing. All these things are merely tools, and the teacher should be qualified to use them properly, or to advise the class in geography to apply them diligently in building up their knowledge in geography. It is a lamentable truth, that our scholars, and especially beginners, are overburdened with long and difficult lessons which they are obliged to commit to memory before they fully understand them. But their sound common sense soon revolts against this process of swallowing lessons without mastication, an outrage committed upon their mental nature, and those scholars that do not possess a very retentive memory, will soon regard this very interesting and useful branch as useless, and a burden, and try to get out of the class at a time when geography would become most profitable to the student.

It is not my object, however, to compare or contrast, but in a few words to state how Geography is taught in Switzerland, and I will leave it to the teachers to decide upon the merits of the methods.

Geography, like the other sciences, is highly esteemed on account of

its intrinsic value. Every scholar, but especially boys, must learn geography. This branch is regarded as one of the necessary safe-guards for the perpetuation of the republic. The only text-books used are the readers, containing a synopsis of the work to be accomplished. A fine set of outline maps, containing maps of the native canton, the country, Europe, Palestine, the Grand Divisions, and the Hemispheres; a few reliefs and globes, are the apparatus. But the teacher generally understands his task. He has studied geography, and has learned to teach it. Upon the teacher, not on the text book, depends the success. Prof. Guyot, without a text-book, is certainly to any class in this branch more valuable than hundreds of his excellent books. He would teach more geography in a week than his books can do in a term.

The series of readers used, contains generally three books. The first book has many object-lessons on geography, and serves as an introduction. The lessons are about two hours per week, and commence with home-geography. The slates are used to draw the school-room, the streets, the native village or city. The teacher blends the lessons with local history and legends; the interest is awakened. Breathless do the classes pay attention. (I remember lessons, I thus received thirty-five years ago.) After the necessary home-lessons, the map of the canton is p oduced. Lesson after lesson is recited by the teacher at the map, pointer in hand. The scholars then recite, one after another, commencing with the best. With the geography they learn, partly by the aid of their readers, but principally through their teacher, the history of their state or canton. O! for those vivid descriptions of the old tyrants of former times, of the destruction of their castles, whose ruins crown the tops of the hills and the mountains! How they wake up the patriotism of the young citizen, and increase his hunger for more knowledge.

The pupils being now well prepared, the map of the whole country is introduced. There they are, the mighty mountains, the blue lakes, and the serpent-like rivers, and among the many states he finds his own. Again, the reader assists; this time the second and third. Geography and history go hand in hand. Years are spent in completing this study. Under the proper management of the teacher the scholar grows a young patriot. He cannot always name the presidents, but certainly the heroes and great statesmen, tell their deeds and sing their praises in spirited tunes. The true teacher does not merely teach boundaries, mountains, rivers, lakes and localities, but always adds useful facts connected with the names. The climate, products, inhabitants industry, education, language, character are well delineated.

Well posted in the geography of the country, the map of Europe is

presented. At this period, thorough and practical lessons are given in mathematical geography, which now becomes comparatively easy. Every lesson is grasped with eagerness. General history assists the work. The scholars have grown stronger and learn easier, and soon a true image of the entire globe is impressed into their memory. But among the fine and fertile countries of Europe and other grand divisions, only two bright spots are known—the land of the Alps and the United States of America—the countries where no monarch rules with an iron hand. The subjects of other countries may enjoy many pleasures and privileges; yes,

> "The bird in the cage may be still,
> For his master may kill him when he will."

Learns the young son of the sterile mountains, and his voice sings the hymns of liberty. And is his land too small for him, he knows another land quite well on the other side of the Atlantic, where liberty prospers, and with delight he studies its geography and history.

This is a short description of the method. The teacher has more independence there than here, because he has more power to lead his scholars. And if you would ask for the cause of the patriotism and liberty of the Swiss, I would answer, without hesitation, it is the patriotism of the teacher, reflected on the souls of the pupils, as in a clear mirror. Many of the teachers may not do so well. Yes, the great great progress in politics, the maintenance of the independence, the decided neutrality in times of war, the bold rebuke of wrongs inflicted by some great power, the public virtue exhibited by the statesmen, these are the fruits of a school system whose influence is felt in the villa of the rich and the hovel of the poor, and which places their children, without distinction, on the same seat in the school-room.

NOTHING BUT LEAVES.

PART IV.

FROM THE JOURNAL OF A TEACHER, EDITED BY PEN.

SEPTEMBER, 186–. We often meet with the crude notion that the young mind is a blank leaf on which parents and teachers may write whatever they please, or that it is like potter's clay, to be shaped by the educator's hand into any form he wishes. Before I commenced to teach, I gave full credence to those theories, and I vowed to write noble lines on the fairest of those unlettered pages, and to mould rare images out of the pliant material. Alas for the resolutions of inexperience! The children soon taught me the humiliating but needed lesson

that I was not to play the part of God himself, creating the infant mind out of nothing, or shaping new men and women after the example given in Genesis. Each individual child had its own individual mind, yea, every shade of its distinctive quality, stamped with the indelible mark of its Maker, whose grand work I, in the blindness of human vanity, had proposed to do. It was the old, old story of "the Teacher taught;" my first experience of the truth of the words "I know that I know nothing."

Instead of a desert in need of artificial culture and irrigation, school revealed itself as an orchard over which I was placed as guardian. No need of my whittling my peaches, plums and apples out of sticks of wood (a figurative way of expressing what I intended to do with the blank leaves and the pliant clay), they were all there on those young trees, though not in their finished form. The *germs* were there, concealing in a microscropic form, the hard stone, juicy pulp, and downy rind of the future peach. These were all there when the tiny bud put forth on the stem its first indication of existence, and all the qualities of the future peach or plum were contained in its atomical construction; all it needed for development were certain conditions—light, warmth and food. Having these, the little bud blossomed and fruited in due time and according to its nature.

So, instead of renewing the story of Prometheus, I found myself an humble apprentice in the art of mind-culture, and a strange and serious work I found it. It made me think of Thorwaldsen, to whom an inferior sculptor said, "It is strange that I can imagine just what I want, yet can never transfer the mind-picture to the marble." The old man smiled as he replied, "I never try to transfer my ideas to the stone, I *see* my image *in* the clay or marble, and all I have to do is to cut it out and free it from the surrounding material."

That's just the case with the child's mind. The faculties are all there, and all you have to do is to find them by opening the way of knowledge. Your chisels and mallets, scrapers and files are always at hand if you want to bring out the statue—I do not mean a score of books, they are rather dull instruments to work with, but the *senses*. The teacher who fully understands their use and end, is a noble follower of Him who also taught by appealing to the senses. His great truths were not uttered in an abstract form, but in the beautiful form of parables, well knowing how easily the mind is taught a lesson which takes the shape of empirical knowledge; should not his example teach us to make a better use of the "five gates" through which may enter heaven or hell?

It is a lucky thing that I am not obliged to write on blank pages, or to form clay images, for in the hurry of doing it for from ninety to one

hundred and ten children in the narrow compass of three hours daily, I fear the work would hardly be done artistically. Instead of that I have about five hundred chisels, mallets and files to work with, and a huge block of—alas!—rather variegated marble, out of which to carve my statue. I know that the grand deity is in the material, but I do not always see it, and random strokes make the chips fly without revealing the hidden treasure. And if I must be candid, I must also confess that I have more than once wielded that other instrument, which has but little to do with my work, which mars it, and which I grasped with reluctance at first, but soon with fierce determination—the rod.

It was a "contraband" who first caused me to inflict corporal punishment. The broiling heat of a day in the beginning of August, had thrown the whole school into a state of torpor, and it was impossible to enforce the plan of lessons. Suddenly the sound of a drum came nearer and nearer, and in a few minutes the whole square surrounding the depot and chapel, was filled with soldiers. They soon covered every available foot of ground, throwing down their knapsacks and blankets, on which they threw themselves, after stacking their guns. There the poor fellows lay in their soiled and tattered uniforms, with bronzed faces and hands, and weary, disgusted faces, right in the broiling sun, at two in the afternoon. Through the open windows we could hear them converse, cursing some unexpected and unexplained event, and "blasting" the officers for commanding them to lie still.

Order in school was now impossible, for not a child was there but wanted to see the soldiers. Many requests to "go out" were made, and promptly denied, and one little fellow even got up and said that Charlie —— wanted to see whether his brother was there. I had to break Charlie's heart by refusing to let him find out. Suddenly, a boy from the Scammon school, popularly called Dummy Jim, because his father was employed on one of the dummies, made a sudden start for one of the windows. Before I could utter a word or warning, Jim had cleared the window at a bound, leaving us in a state of indescribable confusion. At the same time, we heard the hooting and yelling of the soldiers outside, and loud cries of "A deserter! a deserter! Stop, rebel. Trip him up!" A minute later, the door was softly opened, and a group of laughing soldiers presented themselves, holding on to Dummy Jim, who fought like a young tiger, to get away from his captors.

"Here's your deserter, ma'am," said one of the men, "he's a tough one, though, bites like a viper and kicks like an unbroken colt. I guess you'll have to take off some of his hide before he'll give in."

I thanked the men and then turned to my deserter. The former withdrew, which inspired the boy with the hope of getting off easy, provided

he showed himself without fear. So he met my eye with defiance, and putting his hands in his pockets, he quietly walked to his seat. I requested him to come back, but Jim made no answer nor did he stir. I then warned him of the consequences of such conduct and repeated my command, but Jim was determined to keep his place, where he felt perfectly safe. To enter into a fight would have been worse than useless, so I told him to stay after school. But no sooner were the scholars dismissed, than Jim bounded from his seat and bounded down the aisle. I interrupted him, however, and gave him a sound thrashing, then and there. It was my initiation in the art of 'cultivating the sense of feeling,' as Mr. T., terms it, and a sad experience it was, for now the ice was broken, and the children necessitated a series of repetitions.

After school I always remain in the chapel until half-past five and instruct the girls in needle-work, by special request of the school board. On that day I also gave the first lesson in drawing to a class of about twenty boys. Quite a number of the soldiers came in and watched the boys at their work, some criticising, others admiring. I felt rather uneasy at first when the 'boys in blue' made their appearance, for it seemed but reasonable to suppose that these rough, war-worn fellows would hardly prove pleasant companions to school children and their teacher. I was happily disappointed, for the tattered and often dirty veterans were *gentlemen*, and again convinced me of the immense difference between our own soldiers who left their homes to defend liberty and order, and the European *soldateska* which, in times of war, are the terror of women and children. Prussia is the only country in Europe where the citizen is a soldier, and every soldier a citizen.

The soldiers took much interest in our doings, and were soon overflowing with often quaint, and always humorous stories of their own school-days, and many a spicy reminiscence of schools and schoolmasters was exchanged. Most of the men were between twenty and and forty years of age, and had, like myself, received their first instructions (and some all the learning they ever got) in those forlorn backwood log cabins, where spelling-schools are the only thing that breaks up the dull routine of a monotonous round of studies. These men spoke warmly of the superior schools of the present day, and many thought that had they been but ten or fifteen years later, their chances in life would have been infinitely better than they were. Yet most of them spoke with respect, some with a touching affection of their former teachers, and many declared those school-days the happiest time they had known.

I had made a sketch of the chapel on a card which lay on my desk, and one of the boys in blue asked me for it. Of course I gave it to

him, upon which he pulled out his note-book and showed me his treasures, as he called them. They consisted of a number of photographs of relatives and friends, a ring made of hair out of the tail of Gen. Lyon's war horse, a few autographs of well-known officers, and a couple of pen and ink sketches of camps.

"You see, I like a memento of the places I have been in," he said, referring to the latter, "these were drawn by a German boy before we left Missouri. Your card will go with them, it will remind me of our brief stay in Chicago."

All the men had numerous photographs of relatives, friends and sweethearts, and some had packages of letters almost too large to be stored by them. Being on their way to the east, where a concentration of troops is taking place, they may never see their beloved ones again, and so they cannot make up their minds to leave their often bulky treasures behind.

The men expected to leave that night, but did not start until the afternoon of the following day, and the children were pretty lawless, being excited by the noise without and the heat within. Dummy Jim remained invisible that day, but the others, who felt wronged in not being allowed to follow his example, were more unruly than usual, and I felt obliged to take up the rod again. And ever since I have had frequent occasion to use it. Mr. T. is triumphant and compliments me on my improved method. Alas! I fear it shows, first, the reverse of improvement. Still, I cannot deny that the good pupils seem even better than before, since they have seen that I am able to *enforce* obedience—but it must be also confessed that the troublesome scholars have grown worse and see in me no longer their well-wisher and friend.

Altogether, the past month has been a trying one. For two weeks, regiments or parts of regiments, would occasionally make their appearance at the depot, camping there for a few hours—one staid there two days—and although the veterans were almost uniformly kind and polite to us, their presence was a source of annoyance to me, as the children were restless, and sometimes got into trouble with a few of the rougher men. Unluckily, Mr. T. made some sarcastic remarks concerning the soldiers, in the hearing of the children, and one of the boys who fraternized with the men, told them of it. This occasioned quite a row, the insulted heroes declaring that they would "smoke that old spider-legged Squeers out of his rickety old shanty." However, the storm blew over, and peace was restored when the last soldier left.

Am I satisfied with my work? No! It seems as though I worked in vain, and all I have accomplished is, to produce a semblance to order.

My daily audience is like the population of this great city, coming and going, like the shifting quicksand on which Chicago is built. The work I have commenced to-day, will be undone to-morrow, by a change in the number and individuality of my pupils, and I can do nothing to stop this loose attendance. Here are some of the excuses offered for absence: "Split wood." "Went on errands." "Minded the baby." "Uncle came to see us." "Was sick." "Moved."

They say it is generally the teacher's fault if his pupils are dilatory and often absent. I wonder if this rule holds good among the poor of large cities. I have visited a number of parents of chronic absentees and have everywhere heard that it was impossible to send the children regularly. The reasons given are numerous, and generally indisputable, and I feel utterly powerless to counteract this tendency to utilize the children at the cost of their education. When I complain that I cannot do my duty, and that the children learn next to nothing, I often hear the reply, "Why, my children are doing well with you. I think they are getting along nicely. Just teach them as much as you can, it is all they will need."

Of course it is useless to argue with ignorance, but my heart is full of pity for those poor, ill-taught children, whose only portion will be their education—it is hard to be denied even that.

SUCCESS IN TEACHING.

PART I.

BY H. PFUND, ALMA.

[Read before the Teachers' Institute, Fountain City, Sept. 27, 1871.]

Success, in the common acceptation of the term, means either wealth or position, or both. With the teacher, the word has a different meaning. The most successful teacher will never amass a fortune from his earnings, and this fact alone, if nothing else, would consign him to a station low and humble in a country where the social standing of a man is defined by the state of his purse. But the other means of rising to position, i. e. influence and control over the public mind, is also denied him. He does not deal directly with the adult population; his labors do not affect the present state of society as much as the future; and for these reasons educational affairs never command that universal interest that financial or political questions do, nor will the most earnest and faithful services in teaching, continued for years, attract the public notice, or secure the fame and position incident to a single eloquent, well-timed political address, or a public act furthering the financial interests of a community.

Success with the teacher does not relate so much to the benefits accruing from his labors to himself as to those committed to his charge. Success in teaching means: Giving the youth, in the most expedient manner, that harmonious education of mind and heart, which is the condition of individual prosperity and the foundation of our Republic.

It is evident from this that a teacher actuated by motives of a mercenary or ambitious tendency cannot be successful. The teacher's work is a noble work, and success will be with him only whose motives are noble, who is impelled by principles of love and good will towards mankind. Love of children is the first condition, the *conditio sine qua non*, of success in teaching. Its powers over the one inspired by it, cannot be over-estimated; it is an ever present stimulus to him to adhere to all those principles, to cultivate all those talents, to use all those means, which are essential in attaining the great end he has in view. And its influence in the school-room is simply boundless. Let the children once know that their teacher is kindly disposed towards them, that all his acts and words are the outflow of a benevolent heart, and he will have a more complete control over them, if otherwise of a firm character, than a whole volume of rules and regulations and the most vigorous application of the rod could give him; and good school-government is certainly a most important condition of successful teaching.

Much has been said and written about the moral influence of the teacher on his scholars as affecting his government. My own experience I may express in a very few words: The more strictly I adhere to moral precepts myself, the less difficulty I have in governing my scholars. The living example of the teacher has a greater influence on the scholars than all the lectures on morals he may give them, and if it is a worthy example it will secure him their respect and incite them to imitate the model. Teachers ought to guard against the error of thinking their scholars disposed to do wrong and habitually treating them as culprits. Such a course has a debasing influence on the school. The pupils should, on the contrary, receive the impression that their teacher, while he despises vice, places a very high value on virtue, and that he thinks every one of them good and virtuous until the contrary is proved. The good opinion of their teacher is something for which most children care a great deal, and which they would not like to forfeit. And even in case of a misdemeanor, the culprit ought not to be treated as if his chief business was now to receive a punishment for having caused the displeasure of his teacher, but the latter should express his astonishment and sorrow at the idea that the accused should have been capable of committing such a wrong. Even personal insults, which, however, will seldom, if ever, occur, if the right course is pursued, ought not to

be met with a spirit of resentment; but the correction should nevertheless be given in a firm and earnest tone. At such times, appropriate remarks on morals will be most impressive. The consequences of preferring vice to virtue should always be pointed out, as well as the benefits arising from the adherence to good principles. Good moral conduct ought to be encouraged at every opportunity, for the best way to prevent vice or eradicate it, is to plant virtue in its place.

By these and similar means a moral atmosphere will be created, whose tendency will be to ennoble and elevate the scholars and make good conduct a habit with them. It is in this part of education where the internal worth of the teachers' religion will be made manifest most clearly; it is here where the true belief in a living God will show its vital power.

One of the sorest trials of the teacher, and one in which many a one fails, is the preservation of quiet in the school room. A most excellent means of restoring order consists in the suspension of all exercises until there is perfect stillness for about a minute. If it is understood that the minutes thus lost are to be made up before school is dismissed for the day, the scholars will be careful not to occasion a frequent recurrence of this tranquilizing process.

Another means of securing success in teaching, and one which we may directly trace to the love of children, consists in making school life as pleasant as possible to them. Paying some attention to an attractive appearance of the school room, aiding the children in their amusements, lending a willing ear to all their grievances, are some of the means which will lead them to regard the school house as a favorite place instead of a dungeon, as is sometimes the case. Such little deeds of kindness on the part of the teacher will be rewarded by the love, obedience, and by the regular attendance of his pupils. All these results, especially the last, are of the greatest importance, as every one knows.

With regard to teaching itself, I certainly think that a method which will develop all the faculties of the child's mind equally well, one that will necessitate the use of his reason as well as strengthen his memory, that will bring out his judgment as well as animate his imagination, would be best calculated to attain the ends of teaching. We receive impressions through our senses; we distinguish them from others by comparing them and by noticing their difference; we obtain conceptions, ideas of objects by frequent repetition of the impressions they produce in our minds; we obtain vivid conceptions by taking cognizance of all the properties of the respective objects. All these mental processes are caused by the activity of the senses; these are the doors

through which we receive our impressions, and that teacher will be most successful who understands best to present new ideas to his scholars in such a manner that they must use their senses in apprehending them. The ideas taught ought to succeed each other in such order that the child is led on almost imperceptibly from the simple to the complex; all abrupt transitions must carefully be avoided. The teacher having given the necessary explanations on any subject, should ask the scholars questions relative to it, to what extent they have understood it; not merely the questions usually found in the text-books, but those which are best adapted to the capacity of the scholars and which will fully embrace the subject. Even in giving explanations, in gradually unfolding ideas, the child may often be led, by ingenious questions, to discover for himself the relations of things, and while this will gratify him infinitely more than to be told everything, it will heighten his interest and sharpen his faculties. In doing this, strict regard must of course be paid to what the child may know and what he does not know.

Whenever it is not attended with too great a loss of time and when the subject is not too difficult, the pupil ought thus be made to take an active part, not to be a mere recipient. In order to fully comprehend an idea new to him, and make it his own, it is not sufficient that it should have been thought by somebody else; he must think it, and can be made to do this by being required to answer questions relative to the conceptions necessary to constitute this idea. Instruction may be made much more interesting if interspersed with illustrations of a historical or descriptive nature, the latter aided, if possible, by pictures or drawings made on the blackboard. Of the importance of frequent reviews, I think I need not speak.

A pupil instructed in this manner will soon comprehend ideas without much explanation, for he will receive them thinkingly, having acquired a habit of thinking. He will not be a mere receptacle of undigested knowledge, stored away in his brain as grain is in a barn, but his mind will be like a well cultivated field, receiving only to produce. To educate our youth to become independent thinkers, productive of ideas of their own, must be the aim of our teaching, if we would want it to be a success, for none but a nation of independent thinkers are capable of governing themselves.

Let us hear a few words from Pestalozzi, the great founder of a new era in pedagogy, on a system of education which he was nearly a life time in working out. He says:

"A child's first hour of instruction is the hour of his birth. Nature commences her work of instruction on him at any moment when his senses are capable of receiving her impressions. The newness of life

itself is nothing else but the faculty to receive these impressions; it is nothing else but the awakening of the now perfect physical germs, which are grasping at their self-evolution with all their power and impulses; it is nothing else but the awakening of the perfect animal, that now struggles to become a man, and is destined to be a man. All instruction, then, can be nothing else but the art of lending a helping hand to Nature in this, her grasping at her own development; and this art consists mainly in the proportionality and harmony of the impressions to be imprinted on the child's mind, to the corresponding degree of development of his mental faculties. There must of necessity be a certain order in which these impressions are to succeed each other; and their succession should keep pace with the growth of the faculties to be developed. The principal means to avoid confusion, discontinuity, and superficialness in training, consists in the pains taken to render the first impressions of the most essential objects of our knowledge from the very beginning, as definite, correct and comprehensive as possible to the child's perception. Wherever, in the vast domain of ever-producing Nature any object remains imperfectly formed in the germ, there she has lost her power of bringing it to perfection by maturation. Anything which is not perfect in its germ, will be crippled in its growth, in the exterior development of its parts; and this holds as true regarding the productions of the mind, as the productions of your garden-bed; it is as true regarding the results of each single conception, as the well defined condition of a full-grown head of cabbage.

"It is evident that conceptions must be made clear to the child through instruction, before he can be expected to understand the *result* of these conceptions, the distinct idea, or rather its verbal representation. To render an idea distinct, the arrangement of the explanations must be adapted to the notice of the object of which the idea is to be given. This arrangement again consists in the combination of all the means by which children are brought to express their thoughts on the nature and attributes of things in well-chosen terms. In this manner, and in no otner may a child be led to get an idea of the essence of an object in its whole extent, and be enabled to give a concise definition of it. All definitions, *i. e.*, all verbal representations of an object, contain essential truths for the child only so far as his consciousness goes of having vivid conceptions of the nature of that object. Where there is an absence in the child's mind of the most definite clearness regarding the conceptions of an object defined to him, then he will merely learn to play with words, deceiving himself, blindly believing in tones whose sound can give him no other idea or cause another thought than that a noise had just been made. Mushrooms will readily grow in rainy

weather on any dung-hill, and in the same manner definitions without representations of the corresponding objects to the perceptive faculties will as readily beget a sort of mushroom sageness which, however, is doomed to die very soon in the light of the sun, and which must acknowledge the clear sky to be poison for its existence."

TEACHERS' PRIVATE STUDIES.

BY E. CURTIS, NECEDAH.

You have seen an apple with one cheek plump and rosy—overfull—and the other so small that bud-end and stem may be taken at a mouthful. I have been viewing my subject, and it looks very like that apple. For it has two sides greatly disproportionate. Shall we venture to try our tooth in the small side, and say from experience, what a teacher's studies *are?*

A study to make both ends meet, is apparent in the apple. I wouldn't wonder if it were sometimes found in our private cogitations. But it isn't an agreeable study.

I know of nothing more dispiriting than an earnest attempt to solve the problem of the two unknown quantities—how much *must* be spent on self to insure respectability in the face of society—and how much *may* be spent on self, *unselfishly*.

Another depressing subject of study arises from the ever-recurring question—what shall be done with them? With the thoughtless one, who progresses without meaning—the heedless one who listens without hearing—the dull one who strives without succeeding—the hardened one who lies without blushing? No problem of the lights ever wearied the student's brain as do these the teacher's heart. These are the questions that drive us into the *brown* studies—not always dry, as memories of dampened pillows might testify.

More pleasing topics of thought are those concerning the intellectual development of our pupils, methods of instruction in various branches, means of adding interest and vigor to daily recitations, plans concerning any and all the multitudinous duties and exercises of the schoolroom.

Our thoughts concerning these things are often so desultory as hardly to deserve the name of study; and when we speak of them as such, we are perhaps getting our teeth into the full side of the appe—the teacher's studies as they might, could, would or should be. They might, under favorable circumstances, be much; they could, under all circumstances, be something; they would be, if we were determined and per-

severing in regard to them; they should be, in every case, at least sufficient to keep our minds and souls from the damp over-growth of stagnation.

The question arises, What should be the nature and order of these studies? It seems to me that the studies which we daily attempt to teach should first claim our attention. In these we should be thoroughly grounded before assuming our positions in the school-room, and afterward, preparatory to class recitations, we should extend our investigations to details, illustrations, deeper search into principles—thoroughly imbuing ourselves with the knowledge, and the zeal for knowledge, which we desire our pupils to acquire. This takes time, more or less, from every teacher, and it should be given, not grudgingly, but cheerfully.

Next in order I would place the reading and re-reading—study, if I may call anything so *restful* study—of our best literature. We are not able to command all the volumes we would like from time to time to refresh ourselves with, but we can gather about us a few plain-covered, precious-freighted books, that shall prove to us, if we are faithful, storehouses of wisdom. And, through the open doors of public libraries, or the courtesies of friends, we can generally succeed in keeping a fresh volume within our reach, for our leisure moments.

If we have further time and energy, no doubt our minds will be strengthened and our happiness increased by the regular pursuit of some branch of study remote from our immediate duties.

Individual taste and talent must direct in this. One, in the wisdom-bearing tomes of history may find his food and discipline, while another with the intricacies of language whets his intellectual appetites. A third, in the perplexing maze of metaphysics will delight to wander; others, from nature take their lessons, and hie them to the rocks and birds and trees for company. And from these friends they may be sure of learning nothing bad.

I wish we all had the courage and strength needed for such work. We rouse ourselves at times, and, rubbing with our flints, strike out some little sparks, that fall again to darkness, or, fire some brushwood pile to light our thoughts of an evening, while the noble few press on untiringly by the light of their own steadfastness, and grow to be the Aschams and the Arnolds of their time.

A CHILD often has thoughts which it knows not how to express. The mother knowing this, teaches him. So the soul often has hidden experiences which it knows not how to speak, and the Lord has placed before us the scripture language, wherein each may speak the words of Eternal Life.

INFLUENCE.

BY R. D. CARROLL, MONROE.

Life is dual. It has its inner being and its outward embodiment; an inner essence and an outward manifestation. The tree throws out its banner of leaves and blossoms and crowns itself with the glory of its fruitage, because there dwells within its tissues a life, energy which joins earth, and is in its sustenance and growth. Let the finger of Omnipotence but touch this hidden life-current and the proudest monarch of the forest bows his head and passes away. The earth also has its indwelling force, which has lifted up the continents and scooped out the ocean's bed. The volcano and the earthquake are but its outward manifestation. Nature itself is but an effect the outward form of that Infinite one who is its cause and life.

This principle of life duality is eminently an attribute of man. Not only has he two natures, a physical body and indwelling regal soul, but each has its inner life and its outer life. Within the cells and tissues of the body there dwells a secret alchemist and builder, controlling all its vital processes and building in wondrous perfection. So the soul has dual existence. Its inner capability is one of thinking, feeling, willing and enjoying; its outer manifestation is one of influence and achievement.

These two existences are distinguished in their moral aspect by the terms character and conduct. Character is the indwelling principle of the moral life-conduct, the cause of that life in its outward, visible flow. Character is the fountain; conduct the outflowing stream.

But, this is not all. Character is not mere the principle of life; it is also its result—its creation. The human soul is not a mere canvass on which life throws her images of thought, of fancy and desire, only to vanish to give place to their succeeding shadows. Every idea, every emotion, every aspiration, every impulse arising in the soul leaves its impress and becomes a part of it.

The teacher's real influence flows from his inner life; indwelling character is the source of his power and success.

Back of all he says and does, is the man himself; a genuine, personal existence. It is this inner being that is so mighty in influence, so irresistible in action. Our ability to succeed, depends not so much upon what we *know* or *can do*, as upon what we really are—the nature of our moral and intellectual organization. Feebleness of character must impress itself upon our designs; while the individual who is morally and intellectually strong, will succeed in the execution of his purposes. What the man *is*, tells infinitely more than what he assumes to

be. His inner being is wrapped up in no inscrutable mystery. His every thought, feeling and impulse, has its out-flowing channel—its outward sign and expression.

This doctrine also shows that moral character in the teacher, is the vital condition in all systems of moral training. Noble sentiments dwelling regally in the life, are self-articulate, and hence the most potent moral instruction of the teacher must emanate from his inner being. We wear no veil over our souls, in the presence of children. As the electrometer trembles at the presence of the feeblest electric cement, so their hearts are reponsive to our most secret moods, feelings and impulses.

I have somewhere read, that Chinese florists change the hues of flowers, by drawing a silken thread of the desired color, through the seed or bulb of the infant plant, thus creating a bias in its life principle, to elect and appropriate those elements necessary to produce the desired tinge. Whatever may be true in the cultivation of flowers, more than a silken thread, even the current of the teacher's character, runs through all his instruction, imparting to the moral life of his pupils, its own bias and color, and whether the immortal plants committed to his care, shall blossom with the radiance of a life of honor and truth, depends vastly more upon what he is, than upon his outward conscious efforts. The teacher must always exhibit before his pupils a noble and attractive every-day bearing, a course of goodness, of sincerity, of true refinement. And these are bred in years, not in moments. Sir Philip Sidney was the pattern to all England, of a perfect gentleman; but he was the hero, who, on the field of Zutphen, pushed the cup of cold water from his own fevered, parching lips, and held it out to the dying soldier by his side.

Whatever, fellow-teachers, may be the means by which our inner life shines out through its outward environment, of this we may be assured, our inner character will reveal itself, in spite of all our shams and coverings. If angels inhabit our inner sanctuary, their bright forms will be seen at the open doors, and their music will be heard from the towers; but if imps and demons of passion possess the heart, they too will show themselves at the windows, and their discords will burden the outer air.

Power of the Voice.—In the presence of duty, we are liable to speak harshly to children. This, instead of allaying the passions of the child, serves directly to increase them. Every fretful expression awakens the same spirit which produced it. So does a pleasant voice call up agreeable feelings. Whatever disposition, therefore, we would encourage in a child, the same we should manifest in the tone in which we address it.

FIELD NOTES.

BY A NEW SUPERINTENDENT.

EDITORS JOURNAL: I have not forgotten the parting injunction given me as the last Convention of County Superintendents adjourned, "Write for the JOURNAL—good, practical communications." But I have been so pressed with duties in the field, that hitherto I have neglected to obey that injunction.

The winter "campaign," however, is now over; and more from a desire to compare notes with fellow superintendents, before entering upon the summer's work, than in the hope of being able to comply literally, even by obedience to your command, I forward you this.

Entering upon this work of school supervision, for the first time, by appointment, to fill a vacancy, and assuming the duties of the position in the midst of the examination of teachers for the past winter schools, of course gave me no opportunity of forming a plan of operations, and left me free to look over and explore the field before determining upon a method of procedure. School visitation and intercourse with the teachers has been conducted this winter with a view to determine:

1st. What is needed to secure greater efficiency in and benefits from our common schools? 2d. What lists can a Superintendent apply to determine with reasonable certainty a candidate's qualifications for teaching?

And in giving the results of my observation, permit me to say, that if I fail to provoke a little controversy in this matter, or to draw out from others having more skill or experience than myself, views corroborative or otherwise, I shall deem my purpose in this communication to have failed.

In regard to the first point named, if I should say we needed better teachers, it would be considered a very trite remark, and one which would be readily assented to in every place where from any cause there had been dissatisfaction at any time with any teachers. And if I demanded an answer to the question, "In what respect better?" the answer would be as various as the localities making complaint. In one district it would be, capacity to teach advanced scholars; in another, more "government;" in another, more tact for teaching small children, etc., etc.

Now in all these standards, it occurs to me that the demands made are not often the results of personal observation of parents and school officers, but the summary of complaints of the pupils, and indicate that the teacher has failed to interest more or less of the pupils in the

work of the school-room,—failed to so charge its very atmosphere with the spirit of its object, that every attendant shall *feel* there is something to be done, something to be accomplished, in every hour, by every exercise and in every movement of the school session. Therefore I say, we need teachers to engage in this work, who have a definite aim, an objective point, clearly in view in everything they undertake, and who will enlist their pupils with them in the attainment of it, whether that object is the accurate and rapid solution of abstruse mathematical problems, the proper analysis of complicated grammatical sentences, laying the foundation of great interest in and acquaintance with descriptions of this "grand old world" in which we live, in the primary geography class, or conducting a recitation in reading in the first reader, and thereby inducting into the means by which "all things" may be known. We cannot make classical or scientific schools of our common schools, nor can we hope, except gradually, to bring about such a public sentiment that all our school houses will be models of convenience and ease, and be furnished with all facilities for helping and illustrating the teaching.

Moreover, I have observed that it is not a uniform rule that in the largest, best arranged and best furnished school-houses, the best schools are found. It has given me real pain to find in some of these the globes covered with dust, and pushed into the corner, the outline maps used only for window curtains, to save the trouble of opening and shutting blinds, the charts and numeral frame discarded, and thus the public spirit and enterprise of the district turned from a blessing into a curse by being the means of forming or fostering habits which can only be detrimental in any station in life. Such things I have found, but not frequently, I am glad to say, and these have been offset by many, where with poor school-houses, leaky stove-pipe and broken stoves, green wood, little or no blackboard, no maps, charts or globes, patient, earnest, laborious, honest teachers were by the power of their skill and enthusiasm, quickening into life and activity every latent power of thought and expression and volition of their pupils.

Under the present system of qualifying teachers, it is the fault of superintendents if teachers are employed who do not know enough to teach. A great majority of them are fully qualified in that direction, and yet our common schools are lacking in that efficiency for good which they ought to possess, because of this failure in teachers to address themselves to the work as I have indicated. Many who are failing in this regard, ranking as third or fourth rate teachers, might succeed much better than they do. This faculty is not altogether innate; in some measure it may be acquired, and superintendents ought to re-

quire it, school officers ought to require it, and school patrons ought to require it, as a passport of recognition in the profession of teaching.

In regard to the second point mentioned, I have already indicated my judgment of tests to determine teachers' qualifictions, and it is upon this theory that I have arranged my "questions" for the Spring examinations. I have observed that the most successful teachers, almost invariably possess the power of logical and simple analysis—by this, I mean a common sense way of dissecting—which they apply in almost every department of instruction, and which is almost universally relished by scholars of every grade; often have noticed that students in higher arithmetic or philosophy, would become as interested in the recitation in the second reader or intermediate geography, as the classes engaged in those branches. Such teachers also make great use of the blackboard or slate for illustration. It is required of the pupil to *do*, immediately and accurately, whatever and all they have been helped to conceive. Now such tests as will develop a teacher's "faculty" to seize upon and use the most correct and simplest forms of elucidation in any branch, it appears to me are better tests of qualification to teach, than any power to bring to bear set formulas of any character to produce the correct answers of questions.

This power has a corallary in a certain nimbleness—or alertness, perhaps, would better define it; hence in the application of tests, I deem the time given or taken to "answer," an important element. Many times one half the efficiency of a school, is beaten out of it by being *dragged* over protruberances, and the effect is not mitigated by the fact that the inequalities are furrows of a well plowed field. On one of my visiting tours, I was accompanied by a venerable friend, who is in lively sympathy with educational progress, and whose memory still holds in vivid distinctness the methods of "long ago." One of the schools we visited in company, was taught by young lady, small in stature, fragile and delicate in build, but keen and sharp and black of eye, and quick of movement, both in mind and body; the school-house was small, awkwardly constructed, without facilities of furniture of any kind, and it was filled full of pupils, one-half of whom were larger than the teacher, and the largest proportion of these were boys. "Well now didn't she jerk those big boys about lively?" was the remark which expressed my friend's idea of the teacher's method. It was a compliment. Of course he referred to mental, not physical processes; there was no *time* for anything but business. She had caught and conquered by guile. As an high priest I blessed her for it, in the face of the Psalmist's bene diction upon guileless hearts. Paul's "craftiness," wherewith he caught those Corinthian's with "guile," was my justification.

At the concluding meeting of one of the Teacher's Associations, which has been held regularly in the town of —— during the winter, the closing exercises consisted of "comparing notes"—each teacher responding upon roll-call, by rising and stating wherein they should manage a school differently than during this winter to secure more efficiency. There was a great deal of unanimity upon the points: More general exercises; more attention to review; more preparation for class work; more hard work all around; less dependence upon punishment to secure order. And this from the teachers who "more abounded" in these very things than almost any other in the district. If by any means I succeed in helping these in their work, or bring their like in spirit and power, into the field, I shall look for steady improvement in our schools, and count my labors in this, to me, new sphere of action, not altogether in vain.

WEIGHTS, MEASURES AND COINS.

BY MOSES B. BLISS, WEST EAU CLAIRE.

The origin of measures and weights is as old as civilization, and may be traced to a very ancient date. A precise notion can be formed of the magnitude of a line in no other way than by comparing it with another line of known length, for the interchange of ideas of measure is not entirely arbitrary, but fixed by nature, and intelligible alike to all mankind. This seems to have been perceived in early ages. Hence originated the denominations of measures taken from parts of the human body, or from other natural objects; as the hand, the foot, the cubit, the span, the fathom, the barley corn, the hair-breadth, which, though not of an absolute and invariable length, have a certain mean value sufficiently definite to answer all purposes required in a rude state of society. But as civilization advanced the necessity of adopting a more precise standard was felt. And the inadequacy of such measures as the foot, the cubit, etc., (referred to the human body) would be most apparent in application to itineracy, or the estimate of great distances. In order to avoid this inconvenience recourse was had to other methods of estimation, but which in fact amounted only to descriptions more or less vague, and not to measures. Thus in ancient authors we frequently read of a days' journey, a days' sail; and even at the present time we hear of an hours' walk, and so forth.

In looking among the objects of nature for a standard of measure perfectly definite, and at the same time invariable and accessible to all mankind, a very slender acquaintance with geometry and natural philosophy will suffice to show that the subject is beset with innumerable

difficulties. In fact nature presents only a few, if any such elements, which, with the aid of profound science, and a refined knowledge of the arts, can be made subservient to the purpose, and none at all which are applicable without such aid. Attempts to do so we shall hereafter show.

The oldest of the English standards in existence, the yard, dates from the reign of Henry VII, but it has long been disused, and that which, till the year 1824, was considered the legal standard, was a brass rod, in breadth and thickness of about half an inch, placed there in the time of Elizabeth.

Various attempts were made, between the two above dates or periods, to obtain uniformity and accuracy.

A second standard was constructed by Bird, in 1760, similar to the former, and declared by the act of 1824 to be the legal standard of the kingdom, in which the unit of measure was for the first time defined in the following terms: "The straight line or distance between the centers of two points in the gold studs in a brass rod, now in the custody of the Clerk of the House of Commons, whereon the words and figures 'standard yard, 1760,' are engraved, shall be and the same is hereby declared to be the original, genuine standard of that measure of length or lineal extension called a yard." The rod at the time of measurement was at the temperature of 62° of Fahrenheit's thermometer.

ENGLISH SYSTEM OF LINEAL MEASURES.

The yard, as already stated, is the unit of that measure, and is divided into three feet, and the foot into twelve inches. The multiples of the yard are poles, furlongs and miles. The relations of these different denominations are exhibited and their decimal proportions shown in their well known tables. Measures of surfaces and measures of volume or solids are measured by yards, feet and inches, either square or cubic, expressed in the table decimally.

For all sorts of liquids, corn and dry goods, the standard measure is declared by the acts of 1826 to be the Imperial gallon, the capacity of which is determined immediately by weight, and remotely by the standard of length in the following manner: According to the act, the Imperial standard gallon contains ten pounds avoirdupois weight of distilled water, weighed in air at the temperature of 62° Fahrenheit, barometer at thirty inches. The pound avoirdupois contains 7,000 troy grains, and the contents of the Imperial standard gallon are 277,-274 cubic inches—its subdivisions being pints and quarts, and multiples —pecks, bushels and quarters.

THE FRENCH SYSTEM OF MEASURES,

Was introduced during the revolution, and has for its standard the length of a quadrant of the earth's meridian. The unit of measures of length is the metre, which is the ten millionth part of the quadrant. This length, deduced from a trigonometrical measurement of the meridian from Dunkirk to Barcelona, is marked by two very fine parallel lines drawn on a bar of platinium, and preserved in the archives of the Academy of Sciences. From a comparison of the standards of this country with a copy of the metre, its length is found to be 39.37+ inches, to say nothing about the temperature. The unit of the French superficial measure is the are, a surface of ten metres each way, or 100 square metres.

The unit of measure of capacity is the litre, a vessel containing the cube of a tenth part of the metre. The unit of solid measure is the stere, or cube of the metre. All the divisions and multiples of the units are decimals; and the principle of nomenclature adopted was to prefix the Greek numerals to the decimals, multiples, and the Roman numerals to the decimal subdivisions.

In the French system of weights, the unit is the gramme, which is the weight of the 100th part of a cubic metre of distilled water, at the temperature of melting ice. Thus the French discarded all other systems and sent forth the metre in 1795, calling it an universal, invariable measure, with boastings of their great achievements.

Now this great effort of the French savans has been pretty severely criticised by the learned and scientific men of Europe and America. Besel, Puissant, Charlton and Sir John Herschal, have demonstrated that the measurement of that quadrant is 1.361 yards too short, or 4.083 feet less than it should be. To this testimony must be added that of Mr. Arey, astronomer having charge of Greenwich observatory, and M. Schubert, a Russian astronomer of great eminence, who has pointed out specifically the extent of that error, and given reasons why the metre should not be accepted as a standard.

Sir John Herschell, in his lecture on the metre and yard, says: "A more serious objection is to the choice made of the circumference of the meridional or generating ellipses of the terrestial speroid, in preference to its axes of revolution. This is a blemish on the very face of the system—a sin against geometrical simplicity. The Metre as represented by the meterial standard, is too short by sensible and measurable quantity." That quantity makes the grand error, and the whole system being based on the standard, makes the whole a failure. Prof. Charles Davies, in his work on the Metric System, 1871, says: "This is enough for our present purpose, to know that the science of the world

has not accepted the one-tenth million part of the quarter meridian as having a fixed value as represented by the metre, and that the ablest minds of England will not so accept it."

That the metre, as determined by the French measurement, is neither the true nor accepted standard, is a fact well known to men of science in America also. Prof. Joseph Henry, of the Smithsonian Institute, says: "It is nothing more in reality than an arbitrary length, not as convenient as the yard or foot, which are incorporated with the literature and science of the most civilized nations of the ancient and modern world." John Q. Adams, in his report to Congress on weights and measures on the metric system, says: "A system which excludes all geography, astronomy and navigation from its consideration must be essentially defective in principle and uniformity." He says further: "In the meantime the whole French system must be considered as an experiment, upon trial even in France, and should it ultimately prove by its fruit, worthy of adoption by other nations, it will at least be expected to postpone engrafting the scion until the character of the tree shall have been tested in its native soil by its fruits.*

Accordingly it has been found necessary to permit a modification of the system, so that in fact at present in France there are three different systems of measures. The ancient, the decimal and the binary system, or system usual. (See Brand's Ency. p. 731.) There have been several Imperial edicts to remedy the disordered plan, but their would-be improvements have only made it more complicated than ever.

WEIGHTS, MEASURES AND COINS OF THE UNITED STATES OF AMERICA.

The constitution of the United States, Art. I, Section 8, reads thus: "Congress shall have power to coin money and regulate the value thereof, and of foreign coins, and fix the standards of weights and measures." This is all the power delegated to the United States on on this subject, all else is reserved by the people. Congress, as early as 1786, established the Federal money system, on the decimal scale, which practically reduced the whole to dollars and hundredths, or cents, at least for common computations. But in theory, the dollar being the unit, its sub-multiples are dimes, cents and mills, and its multiples are eagles and double eagles. The standard of gold and silver is 900 parts of pure metal to 100 of alloy in every 1,000 parts of coin, the alloy of silver shall be copper, and the alloy of gold coin to be copper or copper and silver. But in no case shall the silver exceed $\frac{1}{10}$ of the whole alloy. The gold dollar weighs $25\frac{8}{10}$ grains; the quarter eagle $64\frac{1}{2}$ grains; the half eagle 129 grains, etc. The silver dollar or unit weighs 389 grains; the half dollar 197 grains, etc. The copper and

* See Davies' Work, 1871, on the Metre; J. Q. Adams and J. Hershell's, all in one volume.

nickel half dime weighs 77.16 grains; the three cent piece 46.30 grains, According to a bill now before Congress, the silver dollar or unit weighs 384 grains; a half dollar weighs 194 grains, etc. Copper and nickel half dime weighs 77.16 grains; 3 cent piece, 46.309 grains; cent, 23.15 grains. These are $\frac{3}{4}$ copper and $\frac{1}{4}$ zinc. (So much for the first clause of the section.)

The last clause of the 8th section of the constitution was complied with at an early date, when the standard yard was fixed by a brass rod, at the temperature of 62° Fahr.; Avoirdupois pound—7.000 Troy grains—27.7015 cubic inches of distilled water weighed in air, at the temperature of the maximum density. The gallon 8.338822 of distilled water (or 231 cubic inches); all of which were identical with the legal standards of Great Britain, prior to 1824, when that kingdom revised and improved its metrology, as will be seen by comparing it with our present plan. Our present system is acknowledged by all who have taken the trouble to examine it, to be ambiguous and complex, containing numerous measures and denominations that are not uniform but confounding to the scholar and perplexing to the teacher, as well as to the man of business.

Yet with all these improvements, with all the time and money lost, we see that the wheels of reform move slowly, although our early presidents, and others, viz.: Washington, Jefferson, Madison and Adams, repeatedly and emphatically commended the subject to the attention of authorities.

Secretary Chase, now Chief Justice of the United States Supreme Court, in 1861, speaks of the importance of an uniform system of nomenclature of measures, weights and coins, such as the wisest of our statesmen have regarded very desirable and by no means impossible. Prof. Bache says "that the labor which is expended in mastering the present complicated system is labor lost. Every purpose for which weights and measures are employed can be answered by a simple and concise arrangement worthy to be called system, and which will one day prevail." Several States, New Hampshire, Maine and Connecticut, by their legislatures, have also loudly called for a uniform decimal system of weights, measures and coins."

But with all this force brought to bear on our servants, the 39th Congress was beguiled to adopt a foreign absurdity and introduce it under a form of law, namely the French system, thus tolerating a permissive use of a standard and system of measures which has been rejected by the most learned and scientific men of the world.

If we settle down to a double set of standard of measures in this republic, then farewell to progress or improvement for ages to come, and we shall plod on in the old worn out path and try to master the myste-

ries of compound arithmetic on which millions of money have been wasted in the education of the young. But our legislatures do not seem satisfied with putting an estopper on all advance and educational progress in these United States ; but having in 1866 plunged the car of improvement into the slough of despond where it has stuck till the present time, the men of this Congress seem disposed to load it down with foreign *weights*, the gramme, etc., on our coins, which if consummated, will forever doom its projectors with those of the 39th Congress, to perpetual shame. (See bill now before Congress on coins, etc.) The people, having ceased to depend on their political servants for the purpose of advancing the cause of education, will resume their reserved rights and act for themselves in the future.

VISITING SCHOOLS.

BY AN OLD MAID.

Having visited the —— school, I give the readers of the JOURNAL the benefit of my observations. I begin at the primary department, and my knock is answered by a black-eyed Miss, of some twenty-two summers. She glances suspiciously at her pocket as she admits me. I glance too, and discover a half embroidered slipper and a letter, that refuse to be entirely hidden.

"Seventy little urchins, on the road to fame."

They are certainly famous for one thing now, and that is, making a most unearthly noise. I decline a proffered seat, and walk deliberately to the farther end of the room, in the rear of the pupils. Instantly seventy pairs of eyes are leveled at me, and as the result of this aim, a discharge of paper wads fall over and around me.

A primmer class is called. The children rush pell-mell to the platform, and instead of reading from the charts that hang on the wall, they spell and pronounce each word with a shrill, nasal drawl. What the words are I cannot tell, from the din between me and the class. A little fellow at the foot of the class concludes to sit down and patiently await his turn. A neighbor blows in his ear; he resents it, and a miniature street fight occurs. The pugilists desist on being told that they will be sent up stairs. What "reign of terror" exists there. I will be on my way to find out. The class took their seats and I take my departure. I ask the teacher as I go out, about the unused charts. She answers, glancing lovingly at her pocket, that "it takes too much time."

The Intermediate Department comes next on my list. I enter without knocking. The teacher points noiselessly to a seat. The pupils

forget to stare; they are more interested in their books than a visitor. There is a writing class in progress and the interest here is, I know, a sample of what will follow. The teacher looks tired and overworked. I ask her what she is reading? (For I know she is reading something; "straws tell which way the wind blows.") She answers, "a book of travels, in connection with my geography class; it keeps up the interest you know to be able to tell them something outside the lesson."

I wend my way to the Principal's room. He admits me with a tremendous bow, and affectionately pats his blonde mustache, as I ask to be shown to the recitation room, where the assistant is conducting a recitation in geography. She shakes out her brown curls, gives me her chair, fixes herself in a pretty position against the table, takes a book and asks one of the scholars to recite. She keeps her eyes so closely on the book, in order to see if the recitation is conducted properly, that she fails to notice that the remainder of the class are paying little or no attention. One writes on the blackboard at her right; another reads a novel; one pricks a neighbor and scratches the seat with a pen knife. Poor deluded little school-ma'm, if you had spent the time it took to do up your hair on curl papers in studying that geography lesson, it would have been much more profitable and interesting to the class, if not to yourself.

I go into the main room where I find that

> "Lessons and tasks are all ended,
> And the school for the day is dismissed,"

And the proprietor of the blond mustache is acting in the capacity of Catholic Priest; that is, he has adopted the self-reporting system, and the naughty ones are expected to stay after school and rehearse their misdeeds to the master. This is considered an even exchange. Consequently, "Do what you are a mind to if you only tell the teacher of it," seems to be the law of the school.

I leave the building thinking I should like to make a few changes. I would launch the Primary Teacher on an ocean of worsted, and let her embroider slippers for her absent lover until she had *slipped* entirely out of the ranks of teachers. I should transfer the Intermediate to a higher position and better pay, so she'd not be so overworked. (I find she supports a widowed mother.) I should give the pretty assistant a pile of *Journals* to do up her hair on, and maybe some of the sense would penetrate her soft little head. I should insist upon the Principal using his books out of school hours; I should also give him some sharp hints and a razor; and his not profiting by them would be the cause of his incurring the lasting displeasure of AN OLD MAID.

SET ASIDE.

BY MRS. H. E. G. AREY.

Let me stand here,
Here in this niche, where friendly shadows fall,
With the cool marble moldings arched above,
And sheltering foils about me. The hurt bird
Clings to its shelter, voiceless. Pass ye on,
With your sweet madrigals. The sunlight falls,
Above you and about, but scarce can pierce
The cloud that wraps my spirit. Vex me not
With kindly greetings. Let no summons come
To woo me to a world in whose gay rounds
My share is canceled. These light love-notes fall
Like a strange echo on my palsied ear,
A far-off tone, where each re-echoed touch
Is sadder than the last. The fair young forms
That tread the glowing mazes of the year,
Crowning the summer's royal cavalcades,
With joy and song and beauty. What are these
But sad reminders of the blight that falls
At morning on the loveliest things in life,
But still repeated mirrors of a face
That in the glowing freshness of its youth
Was chilled to marble—echoings of a voice
That thrilled my heart with gladness; made up all
Of life's rejoicings for me—and is still.

Pass on, and leave me to the silent lot
To which my God hath doomed me. Why should I
Mock your rejoicings with my presence cold?
Why should ye hold before my tortured eyes
The mirror of past joys, in your fresh joy;
Or press on my palled taste the festal cup
Whose drops are bitterness? Can the lip smile
When the heart's founts are frozen? Leave me here,
Here in this niche with marble arched above
And foils of stone about. Of these am I.
My sad heart thanks you for each kindly word;
But leave me here.

RESPONSIBILITY OF THE TEACHER FOR THE HABITS OF HIS PUPILS.

BY C. L. POWERS, MUKWONAGO.

How far is the teacher responsible for the habits of pupils? Some will contend that he is responsible for all the bad habits that his pupils contract, but the writer would beg leave to differ. The teacher is certainly responsible, as far as his example goes, as he as is, perhaps, imi-

tated by them, more than any other person, unless it may be the parent. Then if the daily life of the teacher before the school is unexceptionable, he certainly should not be blamed for the habits contracted from the example of others, and, as is very often the case, from members of the same family.

It is to be expected that the teacher will always be gentlemanly in language and deportment. Should he be given to the common vice of profanity, and indulge in this habit in presence of his pupils, they will follow his example, and he then becomes responsible for it. Do we wonder that the pupils use profane language if the teacher himself does the same? Certainly not. But pupils seldom learn this disgusting vice in this manner, for our teachers certainly are not noted for its indulgence. Where do they obtain their first lessons? By association with older persons in every walk of life. It is very often the complaint of parents, "I do not know where my children learned to swear; they never use such language in my presence, but I am told that they do sometimes in the presence of others."

Others will assert that, if their children use profane language, they learn it at school. This may be very true; *but do they never learn it at home?* Parents are not always as guarded in their choice of language in the presence of their children as they should be. Profanity is an awful vice, wheresoever it is found; whether in the saloon, on the street, or in their own homes in the presence of children, if men take the name of their Maker in vain, it is the same disgusting and inexcusable vice. It may be different in its effects, but it is the same.

It is an alarming fact, that profanity is yearly and daily gaining ground, and our study should be how to remedy the evil. A few years ago we would not think of hearing any but boys and men using profane language, but in this progressive age, it is by no means confined to them. We occasionally find girls, and I am sorry to say, young ladies, (in age, at least,) that are almost as proficient in the art as their fathers and brothers. Where do *they* learn it? Certainly not in the saloon and public places of the town, for they are not frequenters of such places. Do they learn it at school? Sometimes the faculty finds opportunity to develop itself there, but more often it finds its birth at home, in the bosom of the family. Who ever heard of a child's being addicted to this habit, if the male members of the family are exemplary in that respect?

It cannot be denied that there are pupils in every school that are given to the habit, more or less, but it is very seldom that one will use such language in the presence of the teacher. Should the teacher hear oaths used by his pupils, he will of course reprove, and may punish

the delinquent for the offense; but how far does the effect extend? In most of cases, only within range of his hearing. It renders the pupil guarded in his presence, but do they use such language any the less when out of sight and hearing? It is very seldom the case that a correction by the teacher, cures a pupil of this habit, perhaps never. If the head of the family, or the older children, indulge in profanity, it is not to be wondered at that the younger ones follow in their footsteps. The same argument applies with equal force to other injurious habits that pupils fall into, but I have enlarged upon this one habit, as it is by far the most common.— *Waukesha Democrat.*

Official Department.

OFFICIAL OPINIONS.

Prepared by the Assistant Superintendent.

Q. In case of the proposed alteration of a joint district, lying in three or more towns, must a majority of each town board be present and concur, or will it be sufficient to obtain the consent of the majority of one or more boards afterwards, in writing?

A. An order for the formation or alteration of a joint district must be made at a joint *meeting* of all the boards, and have the consent of a majority of each board.

Q. Is it the duty of a town treasurer to pay over the whole of a district tax to the district treasurer?

A. Section 56 (2d) requires that the town treasurer shall "pay over to the district treasurer on demand, all school taxes raised in each district, and collected by him." He is entitled of course to his percentage for collection.

Q. If after the equalization of taxes in a joint district, lying in two counties, a "dog tax" is ordered in one county and not in the other, is the dog-tax paying portion of the district entitled to an equivalent remission of otner taxes, on that account?

A. Hardly. The taxing of their dogs may have a good moral effect upon the canines in the other part of the district, though it must be confessed that badly disposed curs will not, for this reason, probably pay much regard to county lines.

Q. Can a town adopt the town system, although embracing more or less than one township of land?

A. Certainly; "town" does not mean township, in the act of 1869, although in the title, as printed in the code, it reads, "township system of school government." Ordinarily, each town embraces one "township" of land.

Q. Can the district clerk, at a district meeting, after a vote is taken, throw out such votes as he thinks illegal?

A. No; he like any other voter, has a right to challenge any one's vote, but he has no right, nor has the chairman, to throw out any vote, if the voter takes the oath, on being challenged.

Q. Can a district officer resign?

A. There is no provision of law prohibiting it.

Q. If a district officer becomes insane, does that vacate his office?

A. Yes; so soon at least as any legal action establishes the fact of his insanity. An insane man is *non compos mentis*, and as such cannot hold office.

Q. If I buy a farm which embraces a school-house site, of which no conveyance has been made to the district, though promised, does not the land belong to me?

A. If you bought the farm knowing that such conveyance had been promised, it is your duty to execute a conveyance, when called upon to do so.

Q. Can the chairman of a town board condemn a school-house?

A. The *fourth* provision of section 92 of the school law authorizes the county superintendent, "in concurrence with the chairman" of the town board, to order such condemnation, if judged necessary.

Q. Can the voters of a district remove an obnoxious and unfit member of the school board from office?

A. They cannot. The county judge, can remove, on petition, for neglect of duty (see section 124). Conviction of an infamous crime creates a vacancy.

Q. If school is taught on a legal holiday, is it right to have it count as an additional day?

A. It is not, for it would make two days out of one, which the law certainly does not contemplate.

Q. If two members of a district board discharge a teacher, without calling a meeting of the board on the subject, is the discharge legal?

A. It is not; the action of the majority of the district board is not legal, unless a meeting is called, as provided in section 46.

Q. Is it lawful to teach German instead of English part of the time, if part of the parents desire it?

A. Only to the extent of one hour each day. (See p. 85, Sch. Code.)

Q. If a pupil is suspended, until "apology is made before the school," for his misconduct, is he entitled to re-admission at the beginning of a new term, or a change of teachers, without apology?

A. The new term or new teacher does not alter the case essentially. The apology is still due "before the school."

Q. After a contract has been made, with no provision for teaching on Saturdays, is it lawful to alter the contract so as to allow some time lost by sickness to be made up on Saturdays?

A. It would be lawful. The parties to a contract, by mutual consent, may alter its terms.

Q. Our teacher agreed to teach four months, of twenty days each, and taught but nineteen, excluding legal holidays. Has the district board a legal right to pay the full amount of wages, nothing having been stated in the agreement about legal holidays?

A. All legal holidays occurring while the school was in progress, on school days, count as school days, although no school be taught.

Q. In case a county superintendent grants a certificate, on private examination, to an old and experienced teacher, ought he to require another examination in less than a year?

A. Section 94 of the School Code provides that such a certificate "shall remain in force until the next regular meeting for the examination of teachers in the inspection district in which such teacher is engaged in teaching;" hence the superintendent has no discretion in the matter. The policy of the law is regular examinations.

Q. When a county contains two superintendent districts, is not a certificate issued in either district good for the whole county?

A. Certainly not; superintendent districts are entirely independent of each other, in this matter, and care should be taken that the certificates issued by a district superintendent are properly worded, so as not to mislead teachers and school boards.

Q. Is a certificate, given last fall, for one year, good under the new superintendent?

A. A change in the superintendent does not make any difference. A certificate is always good until it expires, if not annulled. But under section 105, a superintendent "may require a re-examination of any teacher," if he thinks it necessary.

Q. Can a county superintendent, under section 105, require a re-examination of all the teachers in the county?

A. As he has the power to require it of "*any* teacher," he must be held to have the technical power to require it of all; but it would be some extraordinary state of things only that would justify such procedure. In a certain case (in another state), the teachers themselves asked a re-examination of a new superintendent, on the ground, that the old one had granted certificates of a high grade indiscriminately, without proper examination.

Q. Ought candidates for certificates to be limited in time, in writing out their answers?

A. It is proper to limit them. Although a person may understand a thing, exceeding slowness unfits him for a teacher. It is indicative of some mental or physical deficiency.

Query Box.

In accordance with an intimation in the last number, we wish to devote very little space hereafter to mathematical questions, and much more to general subjects. The *Query Box* has enabled those of our readers who take an especial interest in mathematics to get acquainted with each other, and they can keep up the acquaintance in other ways, if they desire. The great majority of our readers will be better pleased with more variety.

We are under great obligations to our mathematical contributors, whose problems and solutions indicate a very creditable degree of scholarship in that direction.

CORRECTION.—Page 101, March number, third line from the top, for first number, read first member; fifth line from top, number should read member.

ANSWERS TO QUESTIONS.

65.—Suppose an opening to be made directly through the center of the earth, and a cannon ball dropped into it, where would the ball come to a state of rest?

I cannot agree with the reasoning of W. H. on this question. The ball is no more destitute of gravity and inertia when in equilibrium at the center of the earth, than is a ball projected upward, at the moment it ceases to ascend, or the ball of a pendulum when at rest under its point of suspension. The ball on entering the abyss would fall toward the center with a motion constantly accelerated, though not in the same ratio as happens in bodies above the surface. After passing the center the momentum acquired in falling would be expended in overcoming the resistance of gravitation to its motion from the center. If we suppose the opening to be a vacuum, there is an equilibrium of forces and an eternal oscillation of the ball from one side of the earth to the other. If we suppose a resisting medium admitted the oscillations are gradually contracted, and the ball finally *come to rest at the center*. It may be remarked that we must suppose our opening to be made from pole to pole, else the eastwardly motion of the earth's surface will give the ball a direction that carry it wide of the center. Even if we ignore the effect of the earth's motion, its spheroidal form will oblige us to make provision for a curved line of motion in our opening, if made elsewhere than at the poles or equator.—S. LITTLEFIELD, *Hingham*.

68.—Besides the solutions to this problem, sent by Messrs. Anderson (B. R. A.), Minaghan and Powers, as mentioned in last month, one was furnished by M. Kirwan of Manitowoc. Wishing to close up mathematical discussions in the *Journal*, for the present, we quote some remarks from Mr. Anderson's answer, and omit the work of all the solutions.—EDRS.

This equation cannot be solved by any of the ordinary methods; but remembering, "Every equation having unity for the coefficient of the first term and for all the other coefficients whole numbers, can have only whole numbers for its commensurable roots," we take advantage of this fact and obtain the roots of the

equation by separating the absolute term into its divisors and divide it by those divisors; then we will add the coefficient of y, and divide the sums thus obtained as before; again adding coefficient of the next term to the left until all the coefficients except coefficient of y—4 have been added; *then*, the divisor standing above and corresponding to minus 1, will be the root of the equation.

74.—What is the width of the Frigid Zone, and why are the Tropics of Cancer and Capricorn so called?

The width of the Frigid Zone is 47°, or 3,243 miles. The Tropics which show the boundaries of the sun's apparent path north and south of the equator, derive their name from a Greek word signifying *to turn*. On the 21st of June, when sun enters the sign of Cancer, and its rays fall vertically on its boundary-line to the north, it appears to stop, and return toward the equator. This boundary-line is, therefore, called *Tropic* of *Cancer*. The other one to the south is called *Tropic* of *Capricorn*, on account of the sun's return toward the equator, when it enters the sign of Capricorn on the 21st of December.

85.—A fountain has four receiving pipes—A, B, C and D. A, B and C can fill it in six hours; B, C and D in eight hours; C, D and A in ten hours; D, A and B in twelve hours. It has also four discharging pipes—W, X, Y and Z. W, X and Y will empty it in six hours; X, Y and Z in five hours; Y, Z and W in four hours; Z, W and X in three hours. Suppose the pipes are all open, and the fountain full, in what time will it be empty?—A. N. SEARLE, *Lynxville*.

Since A, B and C can *fill* the fountain in six hours, they can fill one-sixth of it in one hour. By the same reasoning B, C and D can fill one-eighth, C, D and A, one-tenth, and D, A and B one-twelfth of it in an hour. Now, since each of the letters are used three times, the part A, B, C and D can fill in one hour is

$$\tfrac{1}{3} \text{ of } (\tfrac{1}{6}+\tfrac{1}{8}+\tfrac{1}{10}+\tfrac{1}{12})=\tfrac{19}{120}.$$

By the same method we find that W, X, Y and Z can *empty* nineteen-sixtieths of the fountain in one hour, consequently there will be emptied at the end of an hour that part which is the difference between $\frac{19}{60}-\frac{19}{120}, =\frac{19}{120}$, and the fountain will and the fountain will become empty in as many hours as $\frac{19}{120}$ is contained times in $1(=\frac{120}{120})$. $\frac{120}{120} \div \frac{19}{120}=6\frac{6}{19}$, answer.—C. A. THOMPSON, *Lyndon;* also by W. P. MASSUERE, *Arcadia*, and R. L. D., *Trempealeau*.

86.—Place five fives in such a manner that they will exactly equal 556.—D. M.

Ans.—$555\frac{5}{5}=556$.—G. H. D., *Janesville;* BENJAMIN SIMONDS, *Baraboo*, and L. A. P., *Glenbeulah*.

Second Ans.—$5+5+555=556$.—C. A. T., *Lyndon*.

87.—Will some one please inform the readers of the JOURNAL, of the names and terms of office of the several Chief Justices of the State of Wisconsin?

Chief Justice—LUTHER S. DIXON. Term expires May 31, 1875.
Associate Justice—ORSAMUS COLE. Term expires May 31, 1873.
Associate Justice—BYRON PAINE. Term expires May 31, 1877.
Each elected for six years.—R. L. DICKENS, *Trempealeau*.

[Associate Justice PAINE died over a year ago, and WM. P. LYON was elected to serve out the term. The question, it will be observed, has reference to the *Chief* Justices of the State. Who will give them all, from the beginning?—EDS.]

88.—Will some of the contributors to the JOURNAL furnish the readers of the same the names and respective terms of office of the Speakers of the House of Representatives?

1st Congress—F. A. Muhlenburg, of Penn., April 1, 1789 to March 3, 1791.
2d Congress—Jonathan Trumbull, of Conn., Oct. 24, 1791 to March 3, 1793.
3d Congress—F. A. Muhlenburg, of Penn., Dec. 2, 1793 to March 3, 1795.
4th and 5th Congresses—Jonathan Dayton, of N. J., Dec. 7, 1795 to Mar. 3, 1799.

6th Congress—Theodore Sedgwick, of Mass., Dec. 3, 1799 to March 3, 1801.
7th, 8th and 9th Congresses—Nath'l Macon, of N. C., Dec. 7, 1801 to Mar. 3, 1807.
10th and 11th Congresses—J. P Varnum, of Mass., Oct. 26. 1807 to Mar. 3, 1811.
12th, 13th, 14th, 15th and 16th Congresses—Henry Clay, of Ky., Nov. 4, 1811 to March 3, 1821.
17th Congress—Philip P. Barbour, of Va., Dec. 3, 1821 to March 3, 1823.
18th Congress—Henry Clay, of Ky., Dec. 1, 18 3 to March 3, 1825.
19th Congress—John W. Taylor, of N. Y., Dec. 5, 1825 to March 3, 1827.
20th, 21st, 22d and 23d Congresses—Andrew Stevenson, of Va., Dec. 3, 1827 to June 3, 1834, when John Bell, of Tenn., was elected for the balance of the 23d Congress, which ended March 3, 1335.
24th and 25th Congresses—J. K. Polk, of Tenn., Dec. 7, 1835 to March 3, 1839.
26th Congress - R. M. T. Hunter, of Va., Dec. 16, 1839 to March 3, 1841.
27th Congress--John White, of Ky., May 31, 1841, to March 3, 1843.
28th Congress—J. W. Jones, of Va., Dec. 4, 1843 to March 3, 1845.
29th Congress—J. W. Davis, of Ind., Dec. 1, 1845 to March 3, 1847.
30th Congress—R. C. Winthrop, of Mass., Dec. 16, 1847 to March 3, 1849.
31st Congress—Howell Cobb, of Ga., Dec. 24, 1849 to March 3, 1851.
32d and 33d Congresses—Lyman Boyd, of Ky., Dec. 4, 1851 to March 3, 1855.
34th Congress—N. P. Banks, Jr., of Mass., Feb. 2, 1856 to March 3, 1857.
35th Congress—James L. Orr, of S. C., Dec. 7, 1857 to March 3, 1859.
36th Congress—Wm. Pennington, of N. J., Feb. 1, 1860 to March 3, 1861.
37th Congress—Galusha A. Grow, of Penn., July 4, 1861 to March 3, 1863.
38th, 39th and 40th Congresses—S. Colfax, of Ind., Dec. 7, 1863 to Mar. 3, 1869.
41st and 42d Congresses—J. G. Blaine, of Maine, March 4, 1869 to the present.
By W. H., *Lowville* and R. L. D., *Trempealeau*.

89.—Will some one furnish the names and terms of office of the several Vice Presidents of the United States; and mention those who have afterwards held the office of President.

John Adams, 8 years; Thomas Jefferson, 4 years; Aaron Burr, 4 years; George Clinton, 7 1-12 years; Elbridge Gerry, 3 3-4 years; Daniel D. Tompkins, 8 years; John C. Calhoun, 8 years; Martin Van Buren, 4 years; Richard M. Johnson, 4 years; John Tyler, 1 month; George M. Dallas, 4 years; Millard Fillmore, 1 1-3 years; William R. King, 4 years; John C. Breckenridge, 4 years; Hannibal Hamlin, 4 years; Andrew Johnson, 1-8 year; Schuyler Colfax, now in office. Of these, John Adams, Thomas Jefferson, Martin Van Buren, John Tyler, Millard Fillmore, and Andrew Johnson afterwards became Presidents.

Answered by Mrs. S. C. SIRRINE, *Plainfield*, E. A. HAYES, *Waterloo*, R. L. DICKENS, *Trempealeau*, and W. H., *Lowville*.

90.—What are the names of the respective State Superintendents of Wisconsin? —HENRY CROUSE.

I give them in order, commencing with the first: Eleazer Root, Waukesha, 1848-50; Azel P. Ladd, Shullsburg, 1852-3; H. A. Wright, Prairie du Chien, 1854-5; A. C. Barry, Racine, 1856-7; Lyman C. Draper, Madison, 1858-59; Josiah L. Pickard, Platteville. 1860 4, two terms and nine months; J. G. McMynn, Racine, 1864-7, one term and three months; A. J. Craig, Madison, 1868-70, one term and six months; Samuel Fallows, now holding first full term.—W. H., *Lowville*, R. L. DICKENS, *Trempealeau*, and A. O. W., *New Lisbon*.

94.—What is the best evidence we have that the city of Rome was founded 753 years before the Christain era?—L. C.

The best evidence that we have that Rome was founded, B. C. 753, is Roman tradition, as given by Varro and many other writers. Some writers vary a few years, but it is the universal voice of all Roman authors that Rome was founded some time within thirty years of that date. But there is not as much difference of opinion about the exact date of the founding of Rome as there is about the exact date of the birth of Christ. The date of the founding of the city is about the most certain thing in early Roman history, mythical as much of it is.—A. O. W., *New Lisbon*.

92.—Is it consistent with the health and educational progress of scholars to lunch at recess, between nine and twelve, and at recess, between one and four o'clock?—H. CROUSE, *Eau Galle.*

It is evident, that in general this is not consistent, as nearly all our food requires from three to four hours for digestion; and the organs, to remain healthy, must have rest. With small children, this will do; but with adults, at least six hours should intervene between regular meals.—E. A. HAYES, *Waterloo.*

[Mr. Hayes is doubtless of the opinion that the school-house is a place rather for the exercise of the brain than the stomach.—EDS.]

Second Ans.—As study draws to the brain blood that is needed in the work of digestion, thereby hindering such work, it cannot be otherwise than injurious to go directly from eating to study.—W. H.

93.—Given, 84½ square feet of three inch plank. Required, the length of one edge of a cubical box, which can be made from the plank, allowing no waste in sawing. Arithmetical solution desired?—M. BRIER, *Baraboo.*

(1.) $84\frac{1}{2} \div 6 = 14\frac{1}{12}$, the number of square feet in one side of the box;

(2.) $\sqrt{14\frac{1}{2}} = 3.75 +$ ft., the length of one edge.—R. W.

96.—Are diagrams of any real use in teaching grammar?

I think *not*, for these reasons. In order to be able to diagram properly, the student must know the correct use of the words in the sentence; hence the diagram is but a written expression of what he knows of (the analysis of) the sentence, not a means by which that knowledge was obtained. Whatever aid the diagram may afford in parsing tends to make the student dependent upon such disposition of the words, and to lessen his ability to determine the correct parsing when found in the sentence as it is.—L. A. PRADT.

Another Answer.—Ideas can be answered to the mind through the eye as well as through the ear. Diagrams are of considerable value in teaching syntax and analysis, as they show to the eye a representation of the relation or words. For the other parts of grammar they are of no great value. There are many pupils who can scarcely grasp the abstract ideas of grammatical relations, unless presented in some visible form, and for these diagrams are a great help,—A. O. W., *New Lisbon.*

We think that if the diagrams are rightly used, they may be of more relative use in *grammar* that geometrical figures are in geometry. They often point to an error in analysis which was not noticed before an attempt was made to diagram the sentence.—R. L. D., *Trempealeau.*

I think they are. But too much dependence should not be placed in them. They aid the learner in getting to understand the relation of words, etc., to each other, by making *such relation* visible *to the eye.*—C. A. T., *Lyndon.*

DEFINITIONS.—A definition, in order to become perfect, must include the whole thing, or class of things, which it pretends to define, and exclude everything which comes not under the name.—GOOLD BROWN.

The definition of *Case* given in the February number is not complete, because it says nothing of *pronouns*, which have cases as well as substantives. That of *Prepositions* is too copious, and the one for *Interjections* is not quite correct; for the greatest part of interjections do never express a *complete thought.* I prefer the definitions given by GOOLD BROWN, viz.: (1). Cases, in grammar, are modifications that distinguish the relations of nouns or pronouns to other words. (2). A Preposition is a word used to express some relation of different things or thoughts to each other and is generally placed before a noun or pronoun. (3). An Interjection is a word that is uttered merely to indicate some strong or sudden emotion of the mind P. SCHNEIDER, *Gibbsville.*

NEW QUESTIONS.

97.—If, at an annual school meeting a motion for a clerk is proposed and seconded by qualified voters of the district, and the chairman refuses to put the motion, and another motion is proposed that suits the chairman better than the first, is put and carried, is that clerk legally elected?

98.—If, at the same meeting it is proposed and seconded to elect a clerk by ballot and the same evening they elect a clerk by acclamation, can the clerk so elected perform the duties of a clerk?

99.—If the district clerk purchase blackboards, maps and the like for the district, against the will of the director, and the director also refuse to sign the order for the payment of such purchase, what is to be done?

100.—Which of the district officers has the most authority?

[The name of the person who sent the last four questions for the Query Box has been lost. Having reached 100 questions, a new series is begun.]—EDRS.

NEW QUESTIONS—NEW SERIES.

1.—In the sentence, "It is *wrong to do so*," how are the indicated words to be parsed?—L. A. PRADT.

2.—In the sentence, "The pipers loud and louder blew; the dancers quick and quicker flew," are loud and quick different parts of speech? The sentence is in Kerl's Grammar, page 261, 4th exercise, and is so noted as to imply that the author considers the words as different parts of speech.—*Ib.*

3.—Parse the indicated words: It is *forty feet high*. He is aged twenty *years*. It is *well worth the money*.—J. N.

4.—A body weighing 12 lbs., moving with a velocity of 6 inches a second has a momentum of 72. Its striking force is 432. If we say it moves ½ foot in a second, the striking force is 3 and the momentum 6. Which is correct, and why?

6.—Where and when was the first session of the territorial legislature of the State of Wisconsin held?—D. MOWRY, *Windsor*.

7.—What are the corporate names of the several universities and colleges in the State of Wisconsin, and where located and when founded?—IB.

What are the names of the persons that figured conspicuously in the War of the Revolution?—IB.

8.—What is the name and age of the youngest and oldest President of the United States, when the oath of office was administered?—IB.

9.—"Whatever is, is right." "To be, or not to be, that is the question." Will some of the contributors to the *Query Box* produce us an analysis of the above sentences?—IB.

10. In Article VI of the United States Constitution we find the following words: "This Constitution and the laws of the United States, &c., &c., shall be the supreme law of the land; and the judges in every State shall be bound thereby, anything in the constitution or laws of any State to the contrary notwithstanding." Article V of the Amendments reads: "No person shall be held to answer for a capital or other infamous crime, unless on a presentment or indictment of a grand jury," &c. Notice the punctuation, there being no comma after the word *presentment*. Now in view of these provisions, how can this State, or any other, constitutionally abolish the Grand Jury system? Will some Solon "rise to explain?"—A. S., *Broadhead*.

11. Will some one please to inform us through the JOURNAL, if Noah and Daniel Webster were related? if so, in what way?—NORA C. WATERS, *Portage City*.

12. How many female teachers are actually employed in the State, in the course of a year?—A. WOOD, *Prairie du Sac.*

12.—Problem—Given, the base of an inclined plane; what must be its altitude in order that a ball may descend down the plane in the shortest possible time?—L. C.

13.—Will some one inform the readers of the JOURNAL, through its columns, of the names of the different state officers?—R. L. D., *Trempealeau.*

14.—Will some one define "voice," (meaning one of the properties of verbs.) Some authorities say that "voice" is a "property of *transitive* verbs only," while others say that a few intransitive verbs *may take the "passive voice."*—C. A. THOMPSON, *Lyndon.*

15.—How many tenses ought there be given to the subjunctive mode?—*Ib.*

16.—What president was inaugurated on the 5th of March?—W. H.

17.—Is it right to require scholars to answer "perfect" or "imperfect," on calling the roll at night?—*Ib.*

18.—What forces hold the earth in its orbit? Why is its orbit not a circle?—*Ib.*

19.—Are the days and nights at the equator always equal?—*Ib.*

20.—Why will not a watch, keeping correct or unvarying time, always agree with the sun?—*Ib.*

21.—Please explain *action* and *reaction* and the resulting phenomena, in the case of two perfectly elastic balls; one at rest, and the other raised and let fall on the first through an arc of six inches.—J. E. S., *Whitewater.*

Editorial Miscellany.

STATE CERTIFICATES.

The following Board of Examiners has been appointed, for the issuing of State Certificates the ensuing year: Prof. ROBERT GRAHAM, Prof. SAMUEL SHAW and Miss ETTA S. CARLE. They will examine applicants for both kinds of certificates now provided for by law—the unlimited certificate, good for life, and limited certificate, good for five years. The first examination will be held in connection with the annual session of the State Teachers' Association, which will be in Madison, July 9–11. Other examinations for both of these certificates will be held in other parts of the State, which will be announced in due time.

For the limited certificate, the candidate is examined in all the branches required for a first grade county certificate, with the addition of English Literature and Mental Philosophy. For the unlimited certificate, Botany, Zoölogy, Chemistry, Geology and Political Economy are added.

Further details, as to the Examinations, will be made known in a future number of the JOURNAL.

WEIGHTS AND MEASURES.

We give insertion to an article, on this subject, from Mr. BLISS, of West Eau Claire. He proposes another system, of his own, an outline of which we shall give next month.

Dr. F. A. P. BARNARD, President of Columbia College, has published a volume on this subject, in which he elaborately endorses the French system. The Doctor

is considered as high authority on the subject as our country affords. As it is a matter of general—of world-wide interest—we give some extracts from a recent review of Doctor BARNARD's book:

"It is well known that there are two systems of weights and measures, both based on scientific principle, which lay claim to general reception—the English and the French. The former is based upon a carefully ascertained relation, existing between the standard yard and the length of a pendulum vibrating seconds at the level of the sea *in vacuo*, latitude of Greenwich. The latter is based upon a carefully executed measurement of the lenghth of a quadrant of a great circle of the earth, extending from the equator to the pole, of which one ten millionth part is taken as the standard measure of length, and called the metre. A vertical vessel of the internal dimensions of one-tenth part of the metre, and filled with distilled water at 39° 5′ *in vacuo*, at level of the sea, latitude Paris, constitutes the standard weight, called the kilogramme. It is divided into one thousand equal parts, called grammes.

"The French system is more simple than the English, and is more widely received. It is used generally by scientific men in all nations, and has been adopted as a national standard, and its use made compulsory by law, according to President Barnard, by the following nations: France, French colonies, Holland, Dutch colonies, Belgium, Spain, Spanish colonies, Portugal, Italy, North German Confederation, Greece, Roumania, British India, Mexico. New Granada, Ecquador, Peru, Brazil, Uraguay, Argentine Confederation and Chili, embracing a total population of 336,419,595. Metric values have been adopted by the following nations: Wurtemburg, Bavaria, Baden, Hesse-Switzerland, Denmark, Austria and Turkey, embracing a population of 84,039,209. And, finally, the metric system has been legalized and made permissive in Great Britain and the United States, embracing a population of 70,373,091. There may, therefore, be counted as committed to the metric system about 420.000,000 of the most highly civilized portion of the human family. It seems not very unlikely, therefore, that at no distant day a common system of weights and of measures, and perhaps even a common system of money, may prevail among all the civilized peoples of the earth.

"The advatages of such a unification are obvious. All the higher results of all the sciences, from astronomy to chemistry, depend upon the usse of accurate measures and weights, which admit ot being described, and of being reproduced if destroyed. Until the introduction of the French system, all the scientific knowledge of the world stood upon a very insecure basis, depending, as it did, upon certain fixed standards, made of metal preserved in the tower at London. If these arbitrary standards were destroyed, as no one could tell how they originated, or what they represented, the scientific knowledge based upon them would become, to a certain degree, uncertain, and its value proportionably diminished. Since the introduction of the metric system, if the standards were all destroyed, they would be reproduced of exactly the same dimensions as before, and the value of the scientific knowledge based upon them would remain unimpaired. Hence proceeds, perhaps, the highest use of this system—that it renders fixed and certain the most profound knowledge of man.

"A second advantage, not much inferior, consists in its furnishing a common language expressive of quantity, to the scientific men of all nations, and that it obviates the necessity of an immense amount of reduction, and to a corresponding degree diminishes the liability of mistakes.

"Another obvious advantage consists in the facilities it gives for the transaction of business, and the carrying out of mercantile operations among different nations, and in simplifying accounts. A still further advantage would be gained if the same system of unification could be extended to money. And inasmuch as the effect of this additional faculty imparted to the scientific and commercial intercourse of nations tends to draw them more closely together, and by making them more dependent upon each other, to exert a powerful influence in the interest of peace, it is apparent that that subject is is one of the greatest interest, both to the philanthropist and to the Christian. * * *

"The object of President Barnard's book is to represent what has already been done in connection with this system, and to extend a knowledge of its merits, and it cannot fail of exerting a powerful influence in this direction. It may not be generally known that no nation has done so much toward the improvement of weights and measures as our own. The wonderful scientific work, the survey of

our immense sea-coasts, extending for thousands of miles, both upon the Atlantic and Pacific Oceans, depends for its foundation upon accurately constructed measure of length, called Troughton's scale, preserved with sacred care in the cellar of the building of the Coast Survey at Washington. There is an intimate connection between measures of length and measures of weight, and for this reason to the administrators of the Coast Survey has been committed by the Government the subject of weights, and the preparation of accurate weights and the equally accurate balances—marvels of scientific precision—which have been distributed by act of Congress to all the States, for the purpose of producing uniformity throughout the whole extent of the country. A set of metric measures and weights are now in process of preparation, and will be soon distributed through all the States. These must have a powerful effect in calling attention to this subject, and render the publication of works explanatory of their origin, merits and use extremely useful."

Educational Intelligence.

WISCONSIN.

WAUKESHA COUNTY.—The opening Institute of the Spring series commenced Monday, March 25, in the Union School-house at the pleasant village of Waukesha, enrolling in all over 150 members, and embracing evidently the bone and sinew of the teaching force of the county. If any Institute of the season does better, it will need to be up early in the morning. Superintendent NORTH is determined his county shall march in the van, and his teachers do not lag behind. He has a knack for finding their tender places, and pricking them, but they thank him for it, as he puts them in the way of healing them.

Prof. MCGREGOR, of the Platteville Normal School, worked a couple of days, till Prof. ALLEN could arrive, and the teachers may consider themselves fortunate to have benefitted by his happy elucidation of some of the tangled places in arithmetic and algebra, as well as by his admirable address on "Enthusiam." His best argument on that subject is himself. Messrs. STUART, POWERS and other teachers helped as needed, and the Superintendent kept all alive, and the State Superintendent delivered the closing address Friday night. Altogether the Institute was a marked success—not overlooking nearly sixty subscriptions to the JOURNAL OF EDUCATION, as one of its good signs and good works.

THE UNION SCHOOL, at Waukesha, as we learn, is prospering finely, under the management of Mr. I. N. STUART and his assistants, including Mrs. Stuart. The building has been much enlarged and improved, since our last visit seven years ago.

By the way, Mr. Stuart should be credited with conducting the Institute a year ago in Waukesha county, at Oconomowoc, in the report of the State Superintendent, instead of Mr. Graham, whose name is repeated by mistake of the printer.

THE REFORM SCHOOL, where we were most hospitably entertained, seems to be in healthy condition. Industry, cheerfulness and good order pervade the Institution. A reasonable amount of labor at "willow work," "cane seating," etc., is required of the boys, out of school hours—a rule contrasting very strongly with the state of things, in this respect, at the Soldiers' Orphans' Home. If the Trustees of that Institution will call down at Waukesha and spend a day at the Reform School, we think they may get one two good ideas. The Superintendent, Mr. HENDRICKSON, by the way, seems to us to be overworked, and under-paid, considering his arduous and responsible duties, and it would not be easy to find a suitable man to take his place, should he break down.

SAUK COUNTY.—The superintendent elected last fall, Mr. Young, resigned a short time since, and Prof. J. H. TERRY, of Spring Green, formerly of the Platteville Normal School, has been appointed to fill the vacancy. Mr. TERRY will, we doubt not, carry on the good work inaugurated by Mr. VIEBAHN, and keep Sauk in the front rank of progressive counties.

As an illustration of Mr. VIEBAHN's activity it may be stated that during the last school year, he held and conducted nine institutes in his county—so many in fact, that as the ordinary blank would not contain his report, the transcribing clerk in the office of the State Superintendent, overlooked the report sent, and no credit was given him.

PLATTEVILLE.—A note from Platteville informs us that the "highest valuation of a school-house and site" in that village is not less than $10,000, instead of $6,100 as returned.

PALMYRA.—The school at this place is in fine working order, and parents and board seem to take considerable interest in its advance and improvement. Mr. E. S. Tilson has charge of the higher department, Miss A. Ward of the intermediate and Miss J. Kinney of the primary. Mr. T. is an excellent disciplinarian, and everything moves forward without friction and steadily. We have rarely seen better order in a school room than during a short visit to Mr. T's room; the recitations in all the departments showed good preparation and *real understanding* of the different subjects, and teachers and scholars gave earnest of certain success in the future.

WM. ELDEN, formerly Principal at Palmyra, is filling a similar post at Jefferson, Iowa, as we see by the *Bee*. The county superintendent speaks well of him.

MAZOMANIE.—Dropping into the Graded School here, in charge of M. E. WADSWORTH successor to W. H. A. DE LAMATYR, we found it the first day of the Spring Term. The attendance in the previous term, in the higher room, was 122; in the whole school 429. Mr. Wadsworth is seeking to introduce a regular graded course of study. The other teachers are Miss Julia Bartholomew, from Lodi, Assistant; Miss L. D. Park, formerly teacher in Madison, Grammar; Miss Anna Greening, Intermediate, and Miss Lizzie Greening and Nettie Schildt, Primary rooms. We heard Mr. Wadsworth and his corps of assistants are very favorably spoken of.

GENERAL.

We avail ourselves of a page of items gathered by the industrious editor of the *Mississippi Educational Journal*, H. R. PEASE:

TROY proposes to establish a college for women, to cost $500,000.

THE Michigan Agricultural College, at Lansing, has 141 students.

THERE are 6,000,000 scholars and 1,000,000 teachers in the Sunday schools of the United States.

ALL the States entitled to Agricultural College Land Scrip have received their quota, except Arkansas and Florida.

SUPERINTENDENT MCCARTY, of Kansas, says that a large majority of the teachers in that State, favor compulsory education.

MINNESOTA employed last year, in her public schools, 4,385 teachers, their salaries amounting in the aggregate to $540,488.12.

HON. J. L. PICKARD, Superintendent of Chicago Public Schools, reports an attendance of 24,065 scholars; only about 2,000 less than before the fire.